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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/608,067 06/30/00 ARAI

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MM2/1208
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EXAMINER

CRUZ, M

ART UNIT

PAPER NUMBER

2851

DATE MAILED:

12/08/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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Office Action Summary	Application No. 09/608,067	Applicant(s) ARAI ET AL.	
	Examiner Magda Cruz	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- | | |
|---|--|
| 15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5</u> . | 20) <input type="checkbox"/> Other: |

DETAILED ACTION

Drawings

1. Figures 9 and 10 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the relation $j_{\min} < \beta < j_{\max}$ (claims 11, 24 and 36) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Specification

3. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 6-7, 13-17, 19-20, 26-29, 31-32 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Shikama.

Shikama (US Patent Number 5,285,287) in Figure 21 discloses a projector with a light source (1), dichroic mirrors (14B, 14G), mirrors (11a, 11b, 11c), liquid crystal display panels (3B, 3G, 3R) and a dichroic prism (15). In said projector, the light is decomposed into three primary colors (red, blue and green), wherein polarization direction adjusting means is provided for selectively adjusting a color component and the polarization direction (column 1, lines 39-51). Said projector is placed into a cabinet using the rear projector method (column 1, lines 65-68, and column 2, lines 1-5).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5, 8, 18, 21, 30 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shikama in view of Soref (US Patent Number 4,516,837).

Shikama shows all claimed structures except a retardation plate. Soref discloses a retardation plate (21) provided for adjusting the polarization direction (column 5, lines 17-23).

It would be obvious to one skilled in the art to use a retardation plate, as the one discloses by Soref, to adjust the polarization direction in the projector disclosed by Shikama.

8. Claims 9-10, 12, 22-23, 25, 34-35 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shikama in view of Shibazaki (US Patent Number 5,477,394).

Shikama discloses all claimed structures except the plurality of aspherical mirrors functioning as a lens (column 5, lines 63-67 and column 6, lines 1-8), a Fresnel lens (18) and a lenticular lens (19), where the relation $i\text{-min} < \alpha < i\text{-max}$ is satisfied.

It would have been obvious at the time the invention was made for one of ordinary skill in the art to use the aspherical mirrors functioning as a lens in a rear projection display device disclosed by Shibazaki, in the projection apparatus shown by Shikama, to reduce the size of said projector.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 11, 24 and 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The language of the claims 11, 24 and 36 is unclear. It is not clear how the applicant defines the relation $j\text{-min} < \beta < j\text{-max}$, and the direction of the polarization when it is: parallel to the vertical cross section of the screen, parallel to the horizontal cross section of the screen, and parallel to the plane including the image light irradiated on the front surface on the screen and the normal of the front surface.


Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Magda Cruz whose telephone number is (703)308-6367. The examiner can normally be reached on Monday thru Friday 8:30-4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on (703)308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-1782.


Russ Adams
Primary Examiner
Art Unit 2851

Magda Cruz
Patent Examiner
December 4, 2000